

SMART (C.)

HOW TO KEEP WELL.

THE CHICAGO RECORD'S

HYGIENIC MANUAL

LIBRARY
For United States Soldiers
SURGEON GENERAL'S OFFICE
in the Field.

JAN 18 1899

683.

BY LIEUTENANT - COLONEL CHARLES SMART,

Deputy Surgeon-General
United States Army.

“We read the war news in the other papers, then we turn to The Chicago Record to see how much of it is true.”—*Urbana (Ill.) Daily Courier.*

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Disease More Fatal Than the Enemy's Bullets

General orders issued on Decoration day, 1898, from the headquarters of the army by the major-general

commanding require that "every officer of whatever grade will, as far as may be in his power, guard and preserve the health and welfare of those under his charge." The importance of this requirement can be fully understood only by those who have had experience in the camps of large armies and who are aware that usually it is disease and not gunshot injury which scores the heavier death rate. Those who are killed in battle or who die of wounds received in conflict have rarely exceeded in number the victims of disease. In our civil war two men perished from disease for every man who died from gunshot injury, and the diseases which carried them off were preventable diseases, or such as would not have affected them had they been properly protected against the harmful influences to which the soldier is

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more or less exposed during the progress of an active campaign. In our army in times of peace the number of deaths occurring from disease in a year is only about 4 in every 1,000 men, or 1 death among 250 men, while during the years of the civil war it was 1 death in 18 or 19 men, and in 1863 it ran as high as 1 death in every 16 men. This great difference between the death rates of soldiers in time of peace and in time of war explains why the major-general commanding considered it necessary to remind officers of all grades that one of their first duties is to guard and preserve the health of the men under their charge.

Officers' Responsibilities

The power of an officer to preserve the health of his men is materially increased

by a thorough knowledge of the harmful influences which affect soldiers on active service and of the causes of the diseases usually spoken of as camp diseases; but his power for good is limited unless his instructions are obeyed and his advice followed intelligently. No matter how well informed he may be or how earnest in his endeavors on behalf of his command, his efforts can effect but little unless his men appreciate his object and co-operate with him. This booklet

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is intended to present to both officers and men the principles of self-preservation in camp, that disease, disability and death may be lessened and the command kept always at its highest point of health, strength and efficiency.

Importance of Keeping in Good Physical Condition

Protection from disease is, in a general way, effected by keeping the men always in good physical condition, by attention to the person, the shelter, clothing and diet, and the avoidance of all unnecessary exposures and fatigues. When a soldier is, from any cause, below par in his physique he breaks down under influences which otherwise would have but little effect on him.

Vaccination

But a special protection can be given against smallpox. The volunteer soldier should be vaccinated by the medical officer, if, on inspection, he is found to be insufficiently protected against this disease, which is now prevailing both in certain parts of the south and in Cuba. This should be done immediately after muster-in, to prevent outbreaks of the disease and disability from hurried vaccination during active service.

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Shelter Canvas

The shelter provided by the government in camps of organization may consist of temporary wooden barracks or tents of various patterns, such as the wedge or common tent, the wall tent, the Sibley tent or the conical wall tent. These tents are of no account in active field service, because, as they require wagon transportation, the number of wagons would impede the movements of the army, and on account of the activity of these movements the tents would never be where the men were who wanted them. They would be miles away in the wagon train. For shelter in active service each man has, therefore, to carry his shelter canvas over his shoulder with his blanket roll; but from the sanitary point of view this is no disadvantage, for the men have their shelters always with them and are thus saved from many exposures, and in mild or warm weather the shelter tent is a healthier habitation for two men than the large tent for its ten or twenty inmates.

Blanket Roll and Haversack

Before starting on active service the soldier should be fully equipped for the campaign. The lists that have appeared in some of the newspapers lately of articles to be carried by the volunteer on a campaign were

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evidently made up by persons who know nothing personally of service in the field. In his blanket roll the soldier should have a spare flannel shirt, undershirt, pair of drawers and handkerchief, with two pairs of socks, his shelter canvas and a rubber blanket, poncho, pommel slicker or other waterproof garment, as a protection from rain during the march or on guard and as a damp-proof flooring for his bed. His haversack contains his regulation plate, knife, fork, spoon, etc., and has attached to it his cup. Besides these and his arms, ammunition and canteen, he should carry nothing but a first aid packet, needle book containing thread and a few safety pins and spare buttons, match box, towel, soap, pocket comb and looking glass. His shoes and socks should be carefully selected to fit. It is well to start on a march in shoes that have already been broken in by several days' usage in camp. The undergarments should be light-weight woolen mixtures, not too coarse or irritating to the skin. The color of the shirt is usually blue, to preserve the military appearance when worn without the blouse, but lighter colors reflect heat better and are cooler. As the blouse for field service is to be light brown, the shirt should correspond in color. The blouse in hot weather or hot climates is used only as an overcoat in the chill or mists of night or early morning.

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Lunches on the March

At the end of the first half-hour of a march the command is usually halted for ten minutes to permit the various regiments to close up and allow the men to readjust their packs and prepare for the real work of the day. After this there is a rest of five or ten minutes at the end of every hour (unless halts for other purposes render these unnecessary) to rest the men and permit any who have dropped out to regain their places in the column. Lunch taken during one of these rests should always be a light meal.

Exhaustion

On a long march, particularly when it is hurried or forced, and still more so when the weather is hot and sultry, men are likely to become exhausted, partly from fatigue, partly from the heat. When a young soldier becomes faint and giddy from these causes, his face pale and covered with clammy perspiration, his lips livid and his muscles tremulous, it is better for his company or other officers to authorize him to remove his accouterments and rest in any available shade until the ambulance or wagon train comes up; for if in this condition he endeavors to continue with his company he will probably drop into an unconscious state and be unfit for duty for several days.

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When to Drink Water and How

There is a generally accepted notion among old soldiers that troops should get along with as little water as possible during a march. This is a mistake. During exercise in hot weather the human system loses water continuously by the skin and from the lungs, and this loss must be replaced to keep the blood in its proper condition; but it should be replaced as it is lost, gradually, a few swallows at a time. Great draughts should not be taken, though the water supply be plentiful and pure, for they are likely to do harm; and the harm done in this way no doubt gave rise to the mistaken notion just mentioned.

Preparations for Comfort- able Sleep

When camp has been reached at the close of a day's march the soldier, no matter how tired he may be, should not throw aside his arms and equipments and stretch himself in the nearest shade to rest and cool off, because this would probably result in stiffness of the muscles, chill to the surface, a restless, feverish night, with utter disability at surgeon's call next morning. If not on detail for guard, fatigue, picket or other regular camp duty, he and his tentmate should immediately pitch their shelter tent, trench it to keep out the rainfall, even though rain

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seems unlikely, and then prepare the floor for bed by removing hard irregularities and scooping out a shallow depression for the comfortable accommodation of the hip bones. Grass, leaves or other suitable material should then be gathered and layered on the surface, over which should be spread the rubber ponchos. In fair weather the blankets should be thrown over the ridge of the shelter tent to air for an hour or two before the time for their use. All the belongings of the men should be taken under shelter at night to protect them from possible rain when the sky is cloudy or from heavy dews when it is clear. If the shelter canvas or blankets become wet, opportunity should, if possible, be afforded to dry them in the sun or by the campfires before resuming the march.

The Importance of Cleanliness

In an active campaign men often become careless of personal cleanliness, because the facilities for keeping clean are so few as compared with the facilities in the opposite direction. But as cleanliness is the basis of a sound condition of system, officers should see to it that no opportunity is lost of washing or bathing and changing the underclothes. The skin cannot perform its functions if the pores are choked with dirt. Prickly heat, chafings and other inflamma-

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tory conditions may be prevented or alleviated by cleanliness. In the continued absence of opportunities for bathing it is well to take an air bath and a moist or dry rub before getting into fresh underclothes, and in this case the soiled clothes should be freely exposed to the sun and air when the blanket roll is unpacked. Special attention should be given to the feet. They should be bathed or mopped with a wet towel every evening to invigorate the skin and prevent chafing, cracking and irritation from dried secretions.

Body Vermin

Occasionally in active service individuals and even companies be-

come infested with body vermin. Much discomfort, sleeplessness, mental tribulation and broken health may result from this, but the ordinary care which every intelligent man should give to the condition of his person and clothing will speedily free him from the undesirable parasites. If need be, a germicide may be obtained from the medical officer.

Impure Water Should Be Boiled

The water supply of a marching camp is drawn by the men themselves in their canteens and camp

kettles. If it is evidently impure it should be used only for soup or tea or coffee. This

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involves boiling, and the boiling destroys all harmful substances that may be present. The veteran soldier in such a case fills his canteen over night with weak coffee or tea as the water supply for the next day's march. The use of alum or any other chemical to purify water is useless, because when the water is so bad as to require this it should be boiled. The medical officer should inspect the source of the water supply in camp and if he find any preventable contamination or that a purer supply can be obtained at some other point he should make his observations known to the commanding officer. Arrangements have been made at the instance of the surgeon-general for the use of filters, which will give perfectly pure and wholesome water to the troops in the field, but in the absence of these every man should adopt the method of the veteran soldier when the water to be used is surface water or evidently impure, no matter what its source.

Diarrhea Caused by "Bolting" Food

Ordinarily on reaching camp the company cooks prepare the meals for the men; but occasions frequently arise when cooking has to be done by the individual or by squads. Men readily become familiar with the simple processes in which the use of the meat-ration can and

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quart cup is concerned; but it is more difficult to make them understand how frequently digestive troubles arise in camp from imperfect chewing of the food. Many diarrheas are due to the irritation caused by hard masses of bread, beans, etc., in the intestinal canal. In fact, the prevalence of this disease would be materially lessened if every mouthful of food were chewed to a creamlike smoothness before being swallowed.

Rations

Much has been said
and printed recently
about the character

of the rations issued by the subsistence department and the unsuitability of hard bread and bacon as food staples for use in hot climates. This has emanated from those who are ignorant of the subject. Because bacon is one of the articles of the ration it does not follow that troops must eat it or go without. The ration or daily allowance of food for each man consists of certain quantities of certain specified articles. These have a known market value. If the men of a company do not use their allowance of bacon or of any other article the money value of that allowance is credited to them as a company fund with which the company officer may purchase from the subsistence department any of the many articles which are kept on hand for the purpose of varying the diet of

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the men. Years of experience with regular troops have shown the adequacy of the ration. Company officers of volunteers should give earnest attention to this part of their administrative duties.

Dangers of Deficient Diet

Scurvy, which in former times was a prominent cause of disability in armies,

should create no anxiety in these days of canned goods and railroad transportation. When the diet is deficient, particularly in fresh meats, vegetables and fruits, the troops become low-spirited, disinclined for either work or amusement, and sometimes affected with diarrhea. More advanced cases have pains, like those of rheumatism, in the limbs, slight swelling of the free edges of the gums, looseness of the teeth and foul odor of the breath, with probably spots like flea bites on the calves of the legs or other parts of the lower limbs. Scorbutic symptoms of this kind should call immediate attention to the kind and quality of the subsistence stores drawn and purchased by company officers and to the character of the cooking, that the needful variety of diet may be secured.

Camping Ground

Dryness and cleanness are the sanitary essentials of a good

camping ground. If the ground be damp the men will suffer from malarial fevers in

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warm climates and seasons, and from rheumatism and catarrhs when the temperature is low. If it be not clean, diarrhea, dysentery, typhoid fever or any of the specific infectious diseases may be propagated among them. Moreover, a damp camp which is speedily trampled into mud exercises a depressing influence on the spirits of the men. They lose all desire to look smart and soldierly, and the attendance at surgeon's call increases day by day. A dusty or dry, sandy site also is objectionable, for it is heavy underfoot, hot during the day and cold after sundown, while the fine particles pervade the clothing and irritate the skin and eyes.

The military necessity is imperative and often obliges troops to encamp in the most insalubrious localities. If a position has to be held, the men must hold it as well against the causes of disease as against the bullets of the enemy. But when selection is permissible the fullest consideration should be given by commanding and medical officers to the sanitary questions involved. The best camp site is a firm, grassy sod, overlying a gravelly subsoil, with an incline to carry off the rainfall, and the subsoil water ten or more feet from the surface.

Summer Camps

If the occupation of the camp is expected to last for more than one or two nights, and especially if the site or the weather be damp, the men should build

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sleeping bunks, raised two feet from the ground on forked uprights. On this the hay, straw, grass, leaves or whatever is to form the mattress should be spread, with the shelter tent roofing it over. In summer camps or those of warm climates the troops in enlarging and improving their quarters should seek for ventilation and protection from heat and sun glare. Walls should be built of uprights, with interlaced leafy branches. To get better protection from the sun a canopy or awning of brushwood may be raised over the company area, and a brushwood hedge on the windward side is often of value against dust or sand drift. The site of each of these brush shanties should be trenched to keep it dry, and these trenches should connect with a larger trench draining the company street and having an outfall into some neighboring ravine. Depressions on the camp surface should be filled in to grade with sand and gravel, and if the site is so situated as to receive surface water from highest ground it should be protected by an intercepting trench.

Winter Camps

Winter or cold-weather camps need scarcely be considered here, as it is unlikely that our troops will have to construct them during the present war. Garrisons and camps of organization and instruction in the United States will

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probably be provided before winter with frame pavilion barracks, but if any detached battalion or regiment be left to construct its own winter quarters its officers should see to it that the men do not burrow in dugouts. We learned enough concerning these during the civil war to keep any army from attempting another experience of the kind. In the early part of the war many of the regiments excavated the site of their quarters so as to have the floor level considerably below the level of the surface of the ground and banked up the excavated earth against the outside of the walls of their tents or huts. This made the interior warmer by preventing ventilation, but it exposed the inmates to harmful exhalations from the soil. The dugouts, when provided with a stove or fireplace, became practically underground hothouses, and the troops that lived in them had large sick lists of headaches, sore throats, rheumatic pains, pulmonary troubles, and even malarial fevers, all of a low or dangerous type.

Keeping the Camp Clean

Since cleanness is one of the essentials in the selection of a camp site, to keep the site clean should be the object of its sanitary government. The surface should not be contaminated by human excretions. As soon as the camp is formed the sinks should be

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dug. Small sinks for the company are better than larger sinks for the battalion or regiment. Their condition should be carefully supervised and the regulations concerning their use strictly enforced. Kitchen slops should be collected in covered barrels and so disposed of as not to contaminate the water supply of the camp nor that of any of the other camps of the army. The ground under the barrels should be protected by a wooden platform. Garbage should be collected in the same way and carted to an appointed dumping or burial ground.

Careful Policing of Camp Nec- essary

The cleaning or policing of a camp is conducted by police details under the orders of the officer of the day. These clean up the regimental area, attend to the sinks, remove kitchen refuse, stable manure and dead animals, repair defective trenching for surface drainage and keep the pathways passable in rainy weather. The places in which this general policing is likely to be defective are the areas between the regiments. Filth deposited in them will render the air foul and be swept into the ravines and water supply by the first rainfall. It is important that these areas should be kept as clean as the company streets. The police labors of adjoining regiments should overlap rather than fail to meet. The regimental commander is respon-

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sible for the cleanliness or general police of his camp; and the greater or less interest which he manifests in this part of his duties is of importance, as it often becomes accepted as a standard by his subordinates.

The company commander is responsible for the cleanliness of the quarters of his men and of the interspaces between them, the condition of the kitchens, the collection of kitchen refuse and the personal police of the men.

The personal police of the men is often dependent on the condition of the camp. If the camp is dusty or muddy the soldier feels that there is no use in trying to be clean, because as soon as he leaves his shelter on any duty he becomes apparently as soiled as those who have made no effort to improve their condition. In such a case the camp should, if possible, be changed.

Result of Carelessness

With well disciplined troops, capable officers and hygienic gov-

ernment, a good natural site may be occupied indefinitely without the occurrence of any disease due to the conditions existing in the camp; but with inexperienced troops and careless and incapable government, the best site may speedily be rendered unhealthy by contamination of the soil with organic impurities, so that the change of camp site may become a necessity in a very short time.

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For, to preserve the men from harm, it is evident that if foul accumulations be not removed from the camp the camp must be removed from the foul accumulations.

Strengthened by Drills and Exercise

Troops are healthy and improve in condition on well-conducted marches and campaigns when the weather is favorable and the country nonmalarious. When they are in good training they will withstand fatigues and exposures that would break down raw troops, for the resisting powers of the system are in a measure increased by their exercise. Hence drills, practice marches and active field exercises are of value in preparing the soldier for the real work of war, irrespective of the fact that they are essential to a military education. But care should be taken in this work of preparation that the men are not overtrained. The strain of active exercise should not be kept up too long, else some young soldier will be sure to break down with what is called irritable heart. The drill or exercise should be broken by frequent rests. In hot climates all unnecessary exposure to the sun should be avoided.

Diseases Due to Exposure Can Be Avoided

Climatic diseases, or diseases of exposure, are not usually regarded as camp diseases, because they are of common occurrence

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in the every-day life of the civilian; but their prevalence in camps is relatively greater on account of deficient means of protection. In cold weather and seasons and in cold and variable climates the prevailing diseases are sore throats, catarrhs, bronchitis and pneumonia—in fact, diseases of the respiration—and in hot weather diarrhea, dysentery and other diseases of the digestive system, while the rheumatic troubles are associated with dampness irrespective of season; but not one of these is a necessary consequence of the weather or climate. They are the results of avoidable exposures. Among soldiers in the field harmful exposures are more frequent in warm than in cold weather, for in winter the men seek protection, while in hot weather, in seeking shade, coolness and fresh breezes, they always expose themselves to danger.

Wet Feet

One frequent cause of these diseases is resting in camp or sleep-

ing with wet feet. Water should never be permitted to get unnecessarily into the shoes of a soldier in war service. When the feet become wet the first opportunity should be taken of putting on dry socks. Young soldiers are careless, or think it unmanly to take precautions to avoid wet feet. They should be taught that it is not unmanly, but that it certainly is dangerous.

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Wet Clothing

When the clothing becomes wet in crossing streams or in rain-storms during a march there is little danger so long as the men continue in active exercise, but an early opportunity should be afforded of changing and drying clothes.

Perspiration

Similarly, when a soldier becomes wet with perspiration during a hot march, drill or other exercise, the danger is from chill after the exercise is ended. To avoid this, if he cannot give himself a towel rub and change of underclothing, he should put on his blouse and keep moving until his skin and clothes become dry.

Cooling Off

In a word, to rest or cool off, and particularly to fall asleep in a cool, shady place in damp clothes, is to invite any of the diseases of exposure, all of which involve suffering and many of them permanent disability or death.

Intestinal Diseases

Camp diarrheas, as already stated, are frequently due to imperfect chewing of the food and to a taint of scurvy from want of variety in the diet. Other errors of diet, such as the use of improper food, faulty cooking and individual indulgence, also occasion irritation of the in-

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testinal canal, which may end in dysentery. Among the improper food must be included green or overripe fruit, all articles of food for sale by peddlers, hawkers or sutlers, all articles which have suffered damage from imperfect preservation, and fresh meat which has been badly fed or overdriven while on the hoof or which has been kept too long after killing or after cooking.

Hard Water

Hard waters also cause diarrhea, but they are easily recognized, and

when used after boiling are usually harmless in this regard.

Foul Odors

Foul odors, as from unpoliced sinks and dead carcasses, cause

diarrhea and lower the tone of the system so that other causes of disease operate on it with greater power for evil.

Abdominal Belts

Fatigue also predisposes to diarrhea by lowering the resisting

powers of the system, and any chill to the surface or check to the perspiration is often followed by intestinal trouble. Hence the cautions given above about the advisability of wearing light-weight woolen underclothes and changing them when damp, from any cause. The wearing of a flannel binder or abdominal belt is practiced in many hot

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countries as a protection against intestinal troubles from surface chills.

Typhoid Fever The camp fever that under ordinary conditions is most to be

feared by new regiments is typhoid fever. This was the fever which, in the first year of our civil war, struck down about 80 and killed 20 out of every 1,000 men serving with the army. Young men of the military age are particularly susceptible to the disease. It is propagated mainly by excremental filth getting into the water supply. A single regiment in a camp by itself may be able to preserve the purity of its water supply, but when twenty or thirty thousand men are camped in the same locality it is difficult to prevent the drainage of one regiment or brigade from contaminating the water supplies of other parts of the command. The disease is propagated also by contact with soiled blankets and clothing. Dysentery and cholera are propagated in the same way. Cleanliness of the person, of the clothing, of the shelters and of the camp surface is essential to protection from these diseases. The exclusion of filth from the water supply is also essential, but on account of the difficulty of effecting this, the infection possibly present in a doubtful water should be destroyed by boiling the water. Infection can be removed also by filtering the water

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through a special filter of porous earthenware, for which arrangements, as already stated, have been completed.

Infection Carried by Flies. No doubt typhoid fever, diarrhea and probably yellow fever are often communicated to soldiers in camp by the flies which swarm about fecal matter and filth of all kinds and convey infectious material to the food while it is being prepared or served. If for no other reason than to lessen the annoyance and danger from this pest of flies a strict sanitary police is important.

When a case of these infectious diseases occurs the medical department becomes charged with the responsibility of preventing its spread.

Malarial Fevers In hot climates malarial fevers are more frequent in their occurrence and more dangerous than in temperate or cold climates. During our civil war these fevers constituted one-fourth of all the cases of sickness, but the death rate caused by them was much lighter than that of diarrhea, dysentery or typhoid fever.

Malaria Malaria is something which is generated in soils having enough of moisture and warmth to foster the growth of vegetation. For practical sanitary pur-

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poses it may be regarded as a something on which plants live and thrive. If there be not enough of vigorous plant life on the surface to use up all that is produced in the soil the excess will escape into the atmosphere to the detriment of the persons who breathe it. Thus, places are dangerous at night when vegetation is asleep that are not so in the daytime, when plant life is awake and active. In temperate climates fevers occur in the spring before vegetation has attained its vigor, and in the autumn when the annual vegetation is wilted and dying. Correspondingly in the tropics, fevers appear at the beginning of the rainy season, but are most prevalent at its end, when vegetation decays. Grounds where the vegetation has been injured by inundation become dangerous during the subsequent period of draining and drying up. Lands exposed to occasional salt water overflow are specially insalubrious, as the land plants are quickly injured by the salt water.

Marshes

Camps should not be pitched in the immediate vicinity of marshes, bayous, lagoons, ponds or dams where the water rises and falls, nor on recently inundated grounds, bottom lands with rank vegetation or sands with little or no vegetation when the subsoil water is only a few feet below the surface. Should there

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be a swamp or other unhealthy ground in the locality the camp should be pitched on its windward side or separated from it by a rising ground or a belt of trees or shrubs.

Vegetation a Foe to Malaria

Places that are healthy when the natural vegetation is growing on their surface become

unhealthy when this vegetation is destroyed by the breaking in of the ground for agricultural purposes, or when the soil is upturned in the construction of engineering or other works. During our civil war the cutting down of trees for firewood or for the building of corduroy roads, breastworks, bombproofs, abatis, etc., was frequently followed by outbreaks of malarial fevers. Hence, in forming a military camp the natural vegetation in its immediate vicinity should be interfered with as little as possible. Grass, leaves, branches and brushwood used as mattresses, awnings, hedges, etc., exhale no malaria in their gradual decay. It is the ground from which they were removed that becomes dangerous.

Fatigue to Be Avoided in Malarious Dis- trict

Malarial fevers attack by preference those who are already more or less broken down by fatigues, expo-

sures or poor diet. Hence, in a malarious country not only should forced and night

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marches be avoided, but also exhausting work or exercises during the day. In the early morning hot coffee should be issued immediately after roll call, and men mounting guard at night should be furnished with a lunch and coffee.

Chill

Chill to the surface
from insufficient
clothing should be

avoided. At sundown the soldier should put on his blouse, for radiation from the body into the clear skies of warm climates takes place quickly. The body clothing and blankets should be thoroughly dry before turning in for the night. In unhealthy localities even bathing should be indulged in with caution, on account of the danger from chill.

Bunks

The bunks of the
men should always be
raised at least two

feet from the ground, and in dangerous localities the campfires should be kept bright at night.

Mosquito Netting

It is advisable to
carry a piece of mos-
quito netting in the

blanket roll, not only to protect the sleeper from flies and mosquitoes, but to filter the air, for there seems ground for the belief that malarious air thus filtered is to some extent deprived of its noxious qualities.

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Boil the Water A belief in the propagation of malarial fevers by impure surface water is generally entertained. Boiling or filtering the water destroys its infection. Deep well waters are pure in this regard.

Quinine Quinine, arsenic and other medicines are sometimes used advantageously to protect the system against malarial diseases when troops are exposed in particularly dangerous localities, but this should be left in the hands of the regimental medical officer.

Yellow Fever Much unnecessary alarm has been caused in this country by newspaper discussion of the danger to our troops from yellow fever in Cuba. Our people appear to have forgotten that the discipline and sanitary administration of a military camp afford the very means for preventing the occurrence of the disease or stamping out the infection if it should be introduced. When the city of Memphis suffered so severely in 1879 those of the inhabitants who moved into camp at a distance of a few miles were preserved, although the discipline of the camp was not so strict as it should have been. A system of medical

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inspection and disinfection has kept the disease out of the United States for many years back. This same system can keep it out of our camps in Cuba. Outside of certain infected cities there is in Cuba no more danger to our troops than in any of our southern seaports.

To Prevent Its Spread

While operating in Cuba every suspicious case of fever should be isolated by our

medical officers and all precautions should be taken to prevent the spread of infection from a first case. Should a first case occur, the troops ought to change camp, leaving the infection behind them. When, however, the military necessity renders such a change impossible, a guard should be placed around the infected command to cut off all unauthorized communication, and quarantine restrictions should be imposed on the infected localities from which the first case was derived. No person should be received within the lines of the camp without undergoing medical inspection, and no baggage or supplies without being disinfected or passed by the quarantine officer. Water supplies should be boiled or filtered, unless from deep wells, and all general police regulations should be scrupulously carried out. With the exception of fruit protected by an outer rind, no food should be eaten that

has not been thoroughly cooked. There should be no unnecessary exposure to sun, rain or night air, no drills nor fatigue duties other than to furnish needful relaxation and exercise, and no active operations unless called for by the imperative military necessity.

Fight It as an Enemy

In fact, when the military conditions permit, a camp surrounded by infection should be regarded as engaged in a campaign against the disease, and the energies of every officer should be devoted to superintending the conduct of his men with special reference to this view.

Intoxicating Liquors

It is hardly necessary in these pages to say anything of the harmful effects of intoxicating liquors, for every soldier knows something of this in a general way. He knows that when a man is intoxicated his brain is so befogged that he is unable to protect himself from accidents and exposures. He knows that disability and death are often a consequence of intoxication in civil life and that serious results would be relatively more frequent among troops on a campaign because of their greater liability to accidents and exposures. He probably knows also that

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for days after a so-called indulgence in liquor the system is more or less broken down and the individual less able to withstand fatigues, exposures or wounds that would have affected him but slightly when at his best. It may be well, however, for the young soldier to remember that it is not a manly thing to get drunk. It does not prove him to be the very deuce of a fellow. It merely proves that however intelligent, bold and brave he may be, he has taken one step downward toward worthlessness. General officers sometimes promulgate regulations excluding whisky from camp. This is well, but it would be better if every soldier promulgated such a law on his own behalf and appointed himself provost-marshal to see to its fulfillment.

Uncle Sam

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